



PTC Thermistor

Heating element

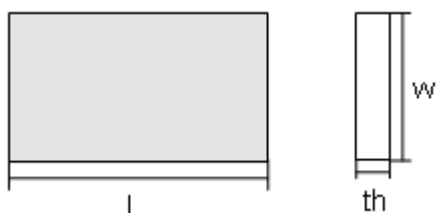
Series/Type:	Project 10/00333
Ordering code:	Project 10/00333
Date:	2011-07-25
Version:	2

Preliminary data
Applications

- TBD

Delivery mode

- Cardboard box

Dimensional drawing in mm


l	$28,8 \pm 0,3$	mm
w	$8,0 \pm 0,2$	mm
th	$1,1 \pm 0,05$	mm
Flatness	$\leq 0,05$	mm

General technical data

Breakdown voltage at $T_a=25^\circ\text{C}$	V_{BD}	≥ 60	V
Operating voltage	V_{OP}	48	V
Rated voltage	V_R	24	V
Rated resistance at $T_a=25^\circ\text{C}$	R_R	10	Ω
Tolerance of rated resistance	ΔR_R	± 30	%
Reference temperature (typ.)	T_{ref}	130	$^\circ\text{C}$
Surface temperature at $V=V_R$ (typ.)	T_s	140	$^\circ\text{C}$
Metallization (not solderable)		Ag	

Preliminary data

Cautions and warnings

General

- EPCOS thermistors are designed for specific applications and should not be used for purposes not identified in our specifications, application notes and data books unless otherwise agreed with EPCOS during the design-in-phase.
- Ensure suitability of thermistor through reliability testing during the design-in phase. The thermistors should be evaluated taking into consideration worst-case conditions.

Storage

- Store thermistors only in original packaging. Do not open the package before storage.
- Storage conditions in original packaging: storage temperature -25°C ... $+45^{\circ}\text{C}$, relative humidity $<75\%$ annual mean, maximum 95% , dew precipitation is inadmissible.
- Avoid contamination of thermistors surface during storage, handling and processing.
- Avoid storage of thermistor in harmful environment with effect on function on long-term operation (examples given under operation precautions).
- Use thermistor within 6 months after delivery.

Handling

- PTCs must not be dropped. Chip-offs must not be caused during handling of PTCs.
- Components must not be touched with bare hands. Gloves are recommended.
- Avoid contamination of thermistor surface during handling.

Soldering

- Use rosin-type flux or non-activated flux.
- Insufficient preheating may cause ceramic cracks.
- Rapid cooling by dipping in solvent is not recommended.
- Complete removal of flux is recommended.

Mounting

- Electrode must not be scratched before/during/after in the mounting process.
- Contacts and housing used for assembly with thermistor have to be clean before mounting. Especially grease or oil must be removed.
- When PTC thermistors are encapsulated with sealing material, the precautions given in chapter "Mounting instructions", "Sealing and potting" must be observed.
- When the thermistor is mounted, there must not be any foreign body between the electrode of the thermistor and the clamping contact.
- The minimum force of the clamping contacts pressing against the PTC must be 10 N.
- During operation, the thermistor's surface temperature can be very high. Ensure that adjacent components are placed at a sufficient distance from the thermistor to allow for proper cooling at the thermistors.
- Ensure that adjacent materials are designed for operation at temperature comparable to the surface temperature of thermistor. Be sure that surrounding parts and materials can withstand this temperature.
- Avoid contamination of thermistor surface during processing.

Preliminary data

Operation

- Use thermistors only within the specified temperature operating range.
- Use thermistors only within the specified voltage and current ranges.
- Environmental conditions must not harm the thermistors. Use thermistors only in normal atmospheric conditions. Avoid use in deoxidizing gases (chlorine gas, hydrogen sulfide gas, ammonia gas, sulfuric acid gas etc), corrosive agents, humid or salty conditions. Contact with any liquids and solvents should be prevented.
- Be sure to provide an appropriate fail-safe function to prevent secondary product damage caused by abnormal function (e.g. use VDR for limitation of overvoltage condition).

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